

FIG. 1

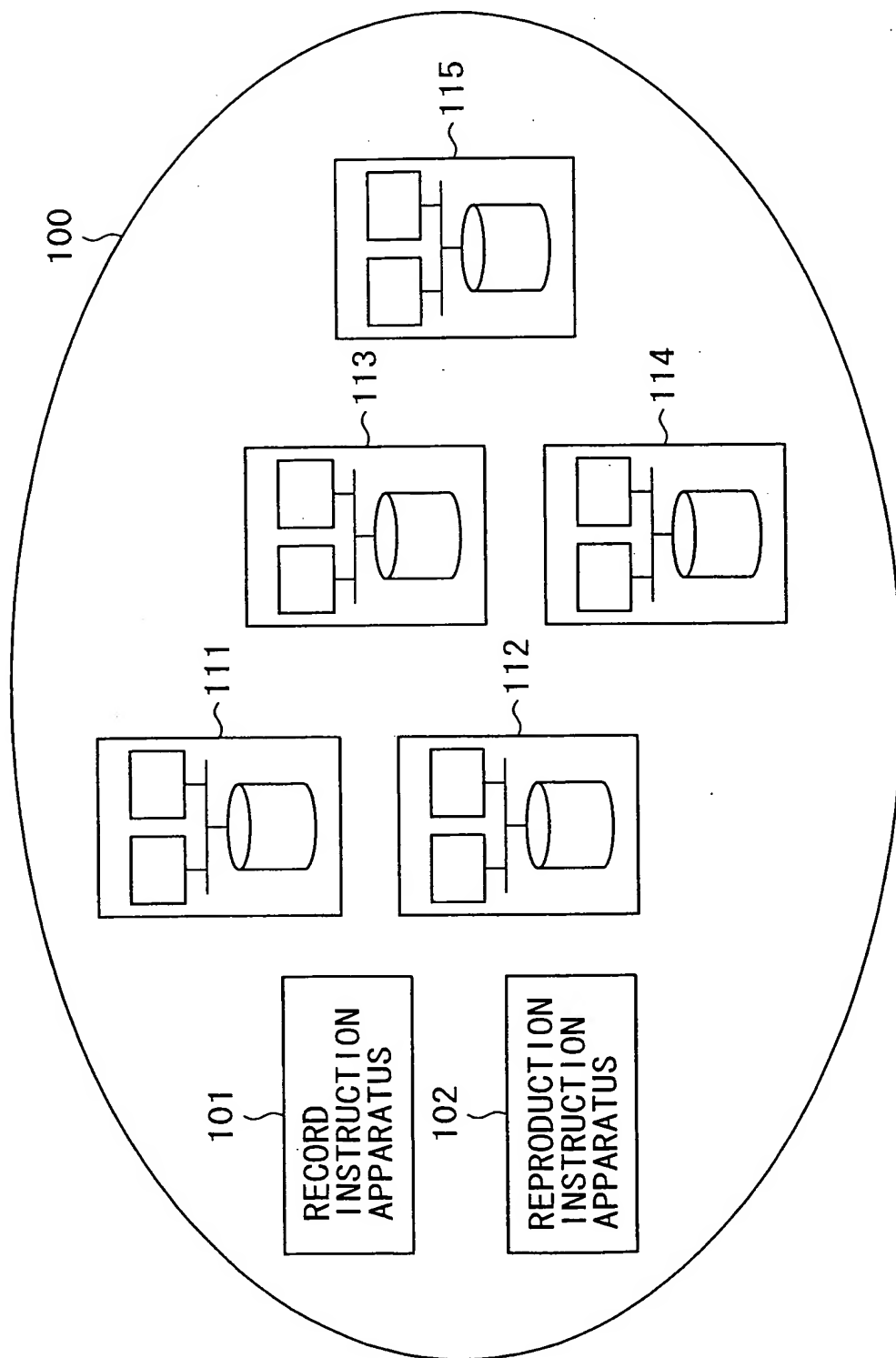
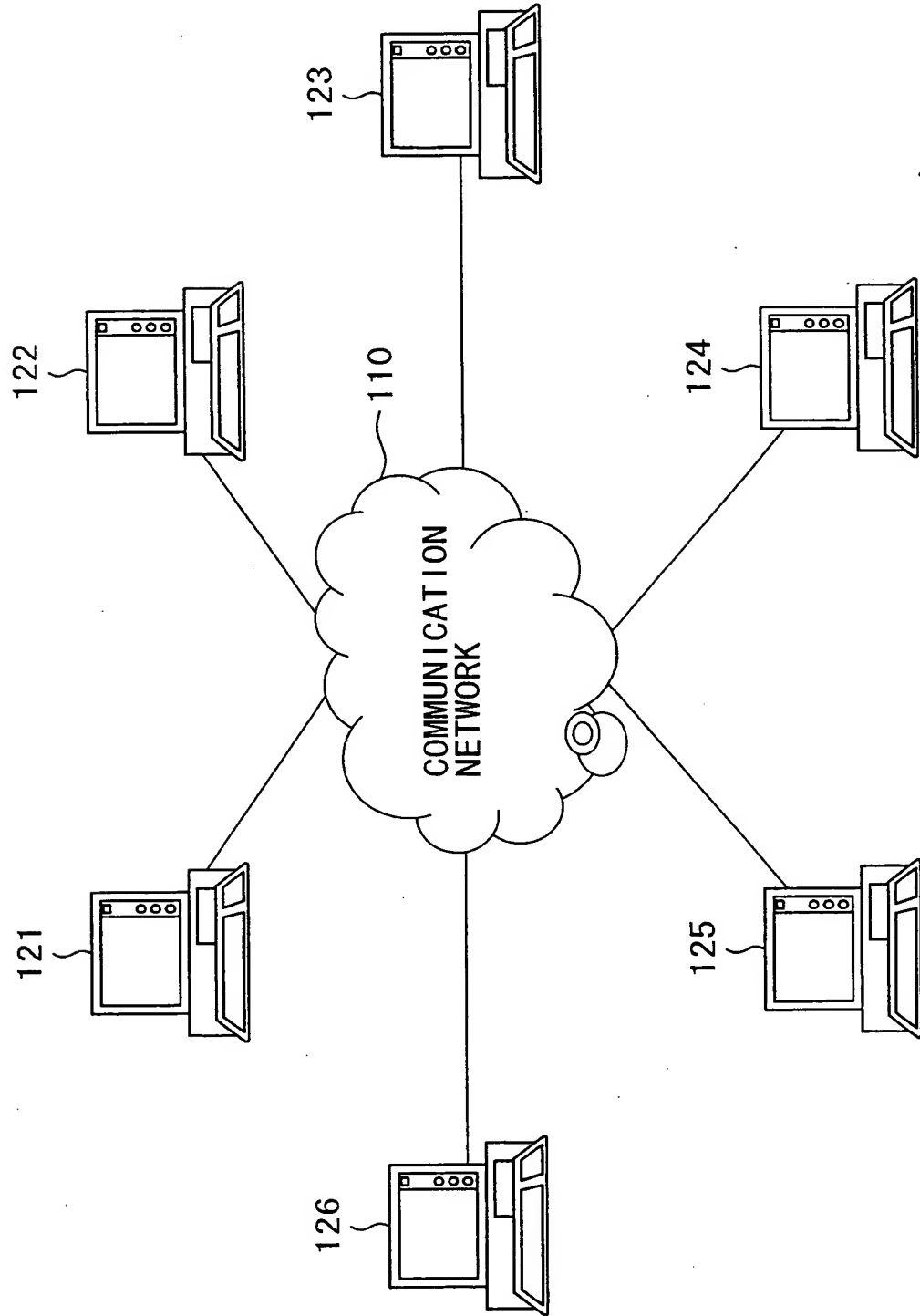


FIG. 2



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FIG. 3

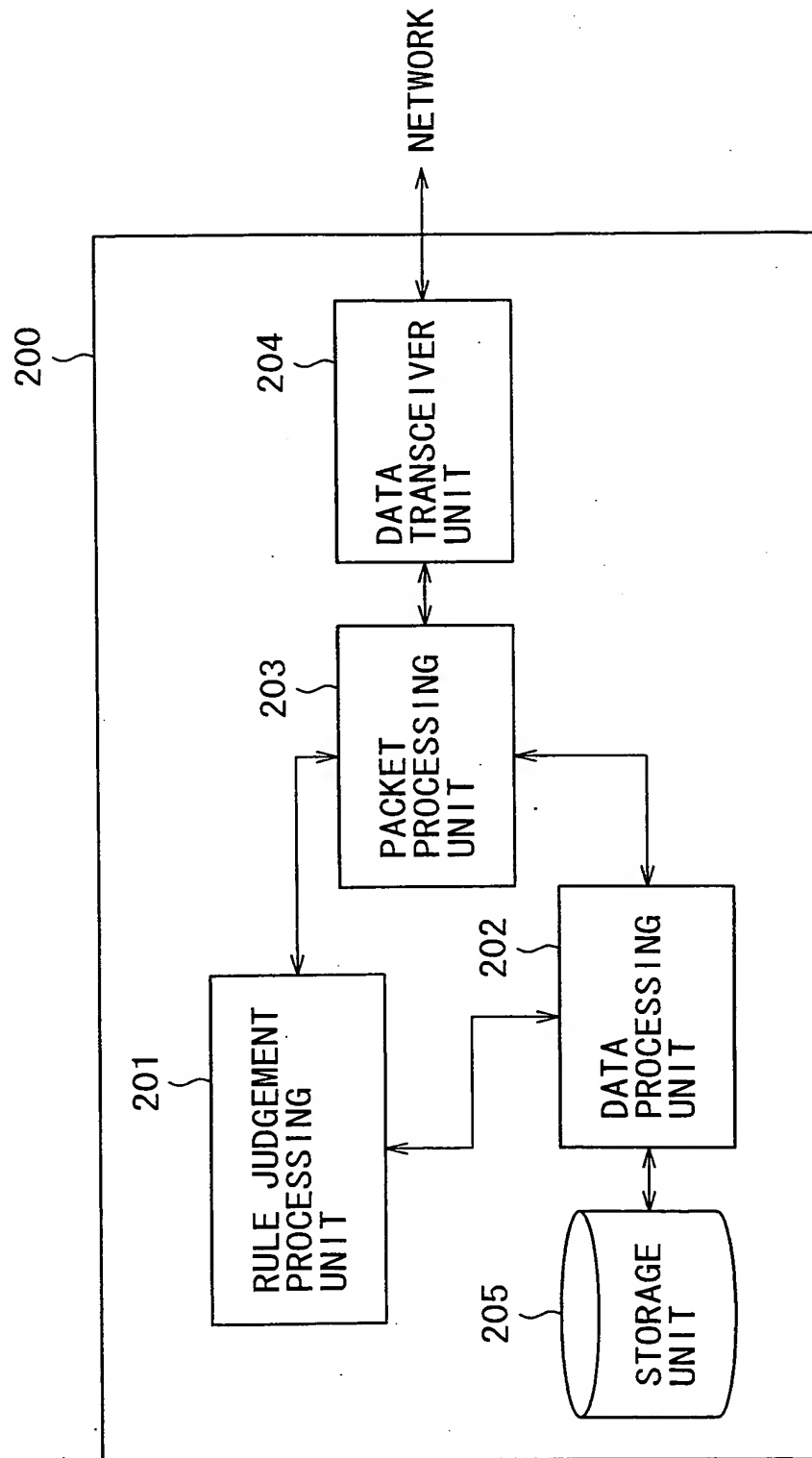


FIG. 4

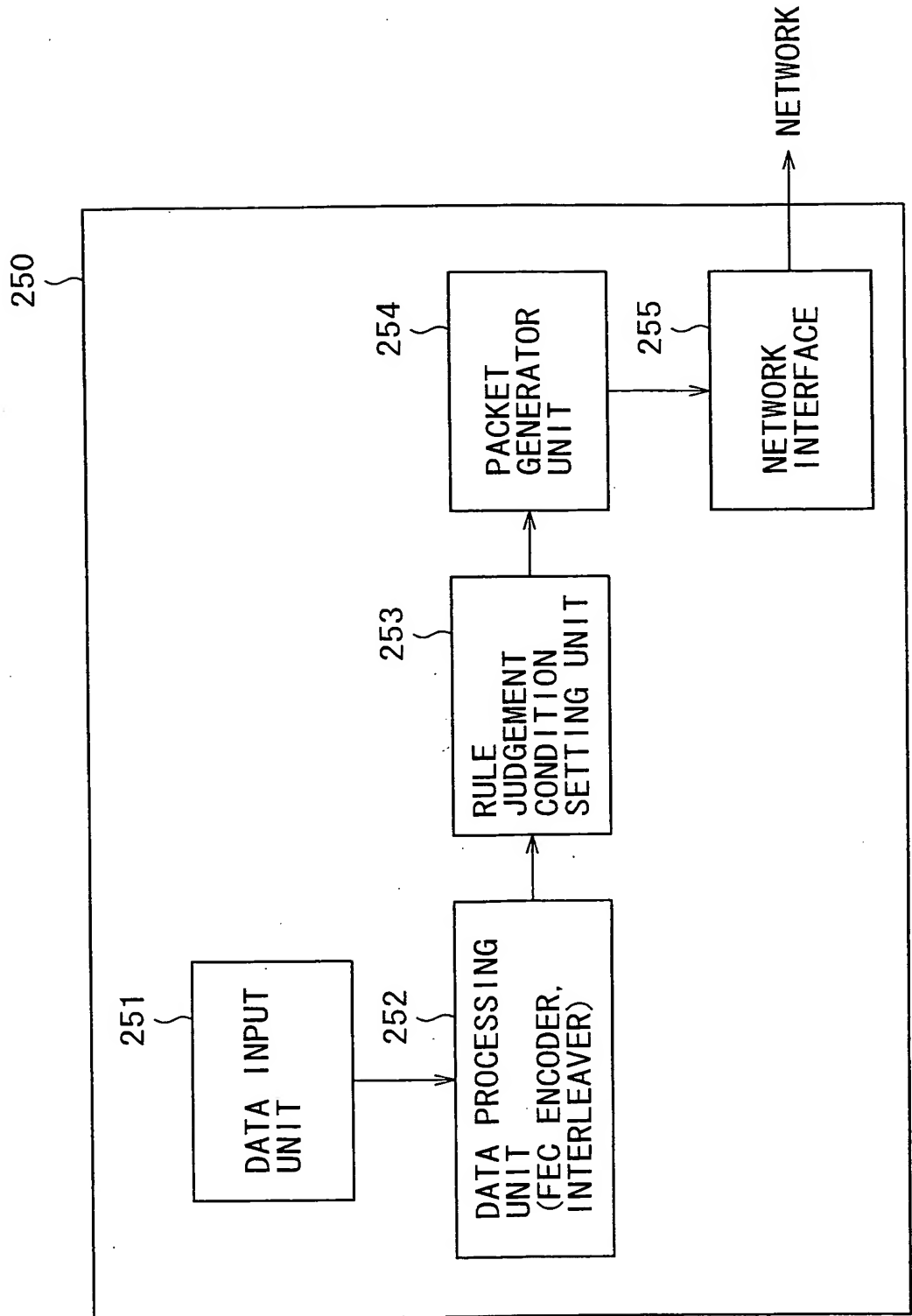


FIG. 5A

ORIGINAL DATA
(BLOCK NUMBER P)



FIG. 5B

FEC ENCODING

PROCESSED DATA
(BLOCK NUMBER q)



FIG. 5C

INTERLEAVE

PROCESSED DATA
(AFTER INTERLEAVING)

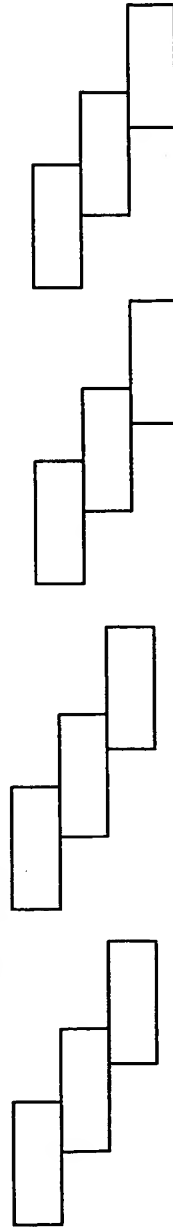
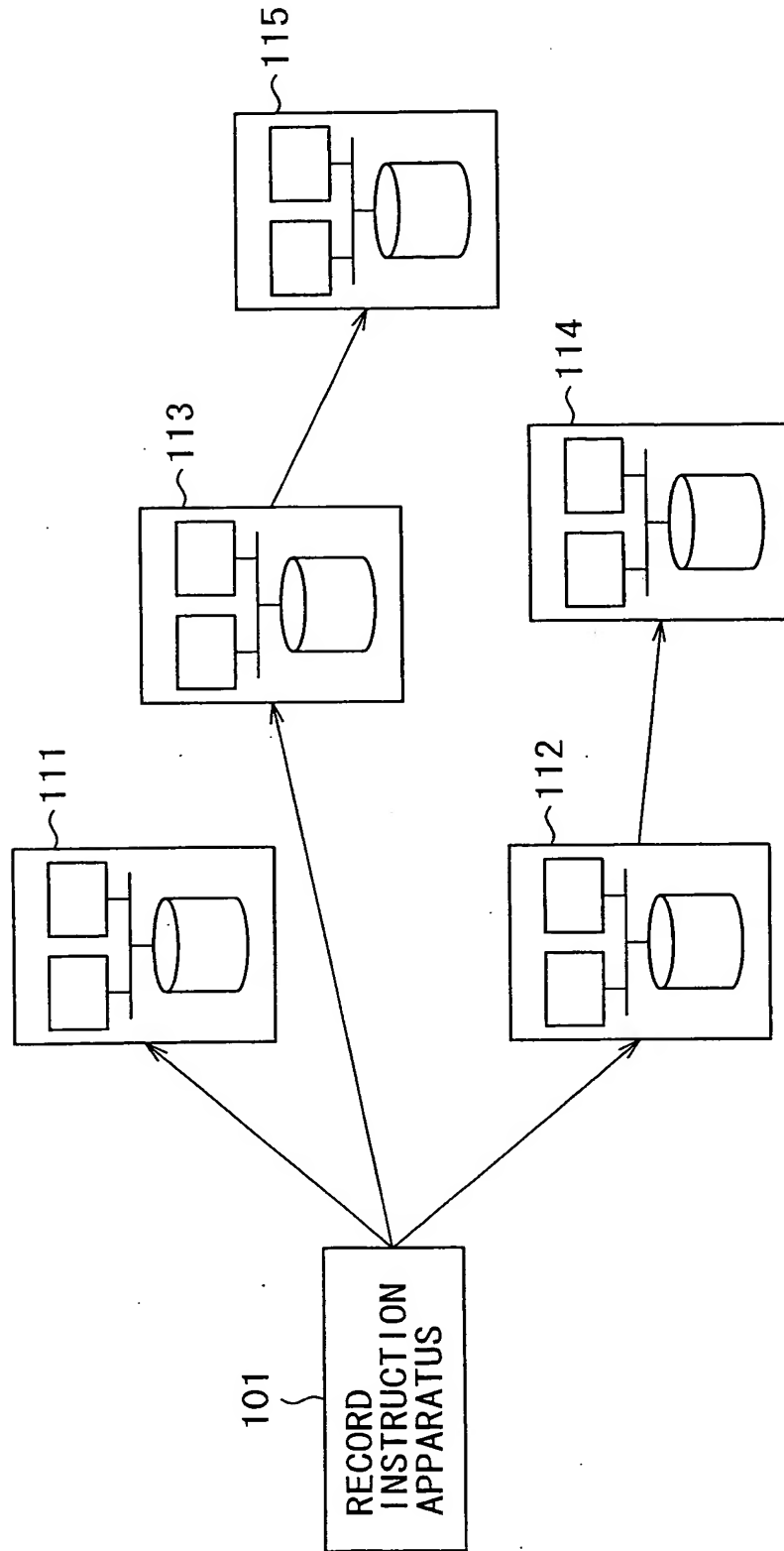


FIG. 6

HEADER	RECORD RULE JUDGEMENT CONDITION STATEMENT	PAYLOAD	FOOTER
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FIG. 7



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FIG. 8

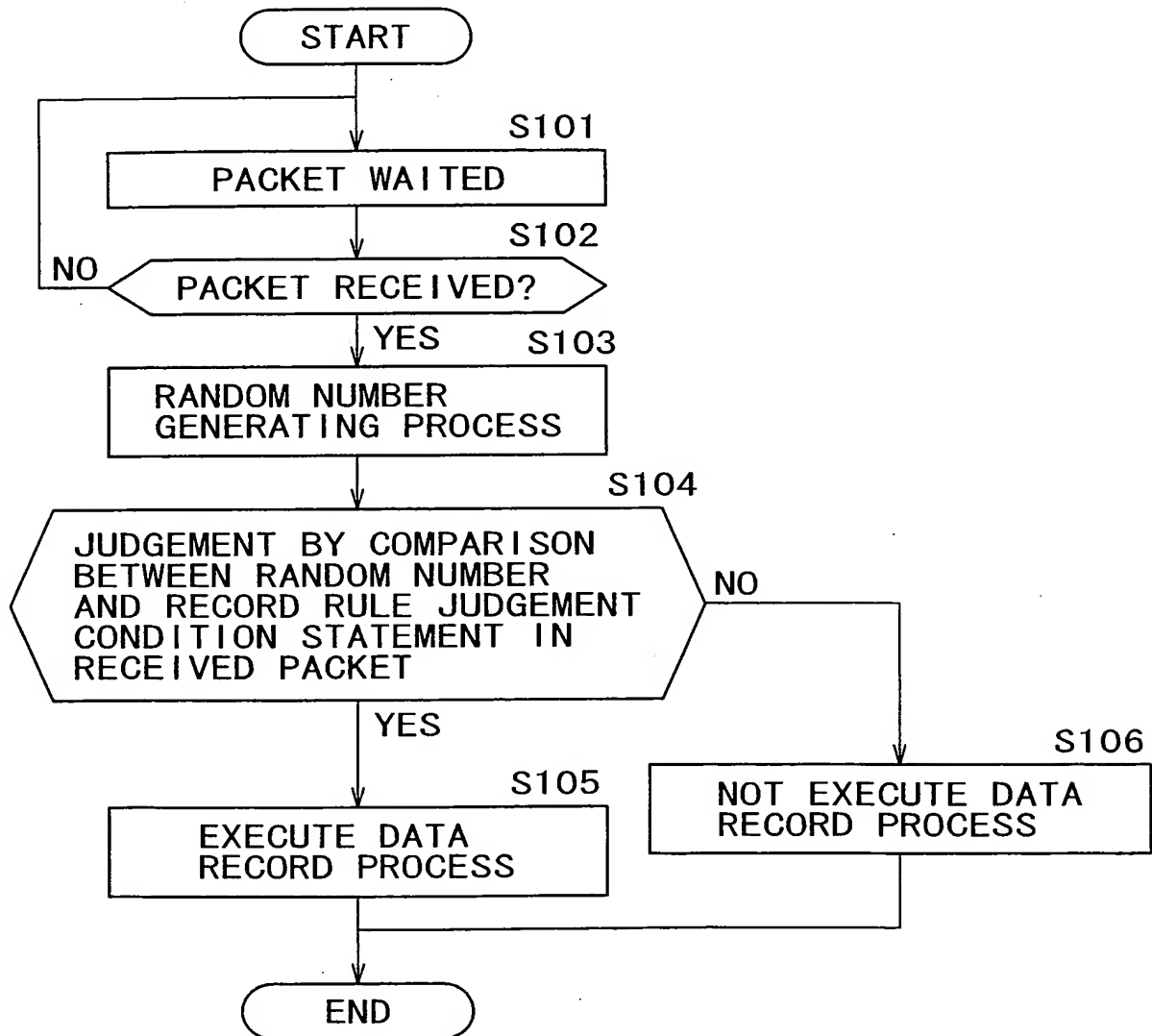
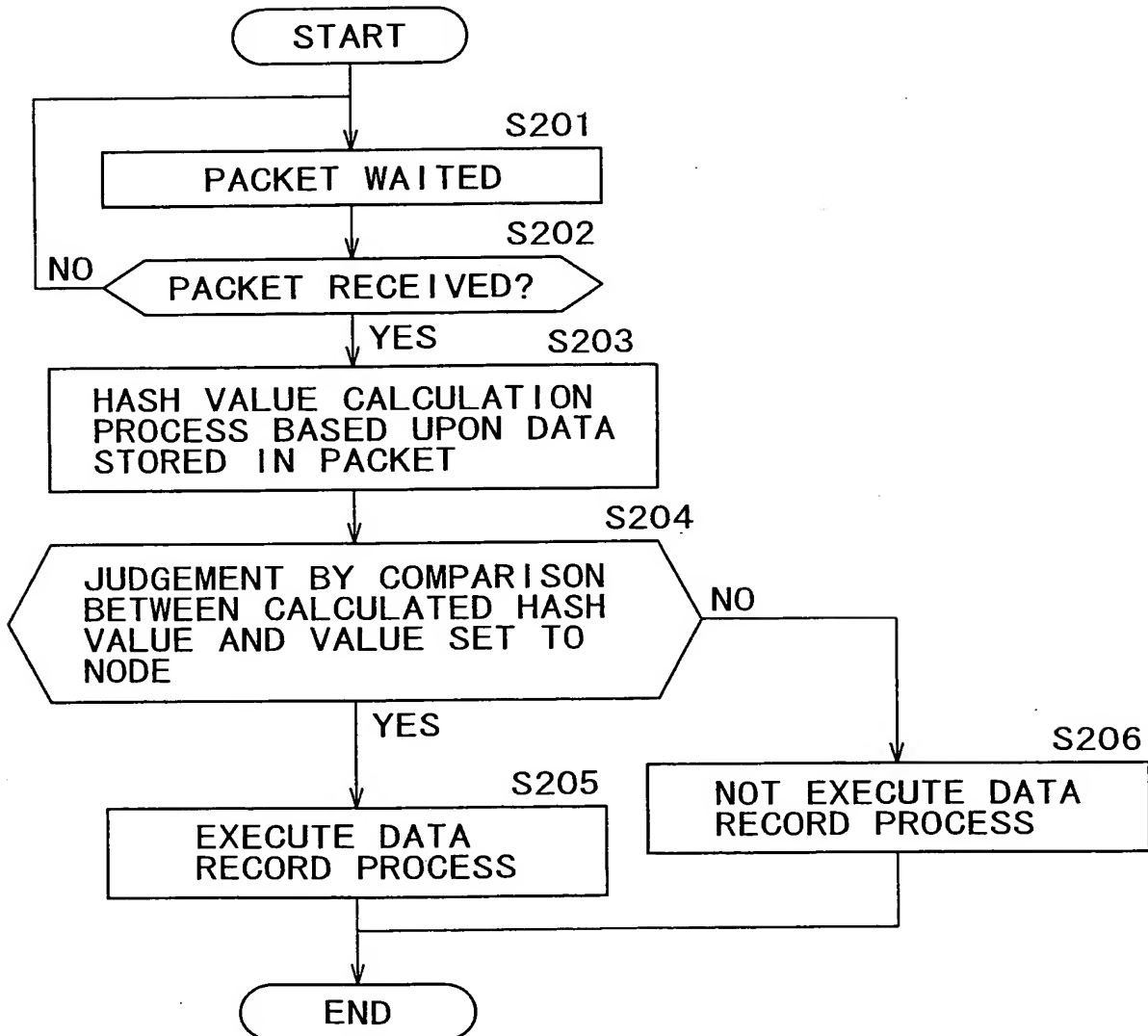


FIG. 9



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FIG. 10

DATA ID	DATA CONTENTS	HASH VALUE (MD5) OF DATA ID	HASH VALUE (MD5) OF DATA CONTENTS
abc	abcdefghijklmnpq rstuvwxyz	900150983cd24fb0d 6963f7d28e17f72	c3fcd3d76192e4007df b496cca67e13b

FIG. 11

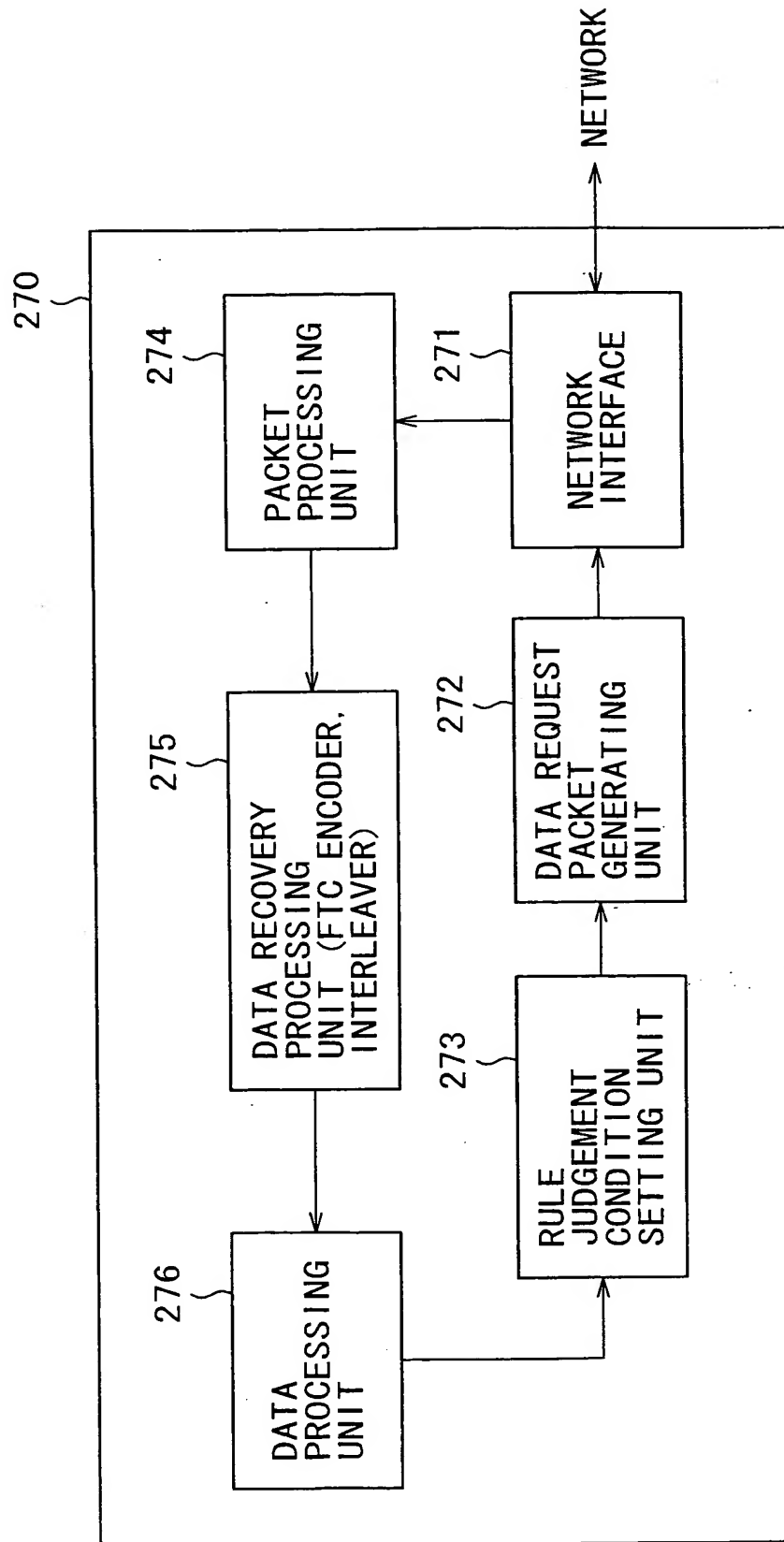
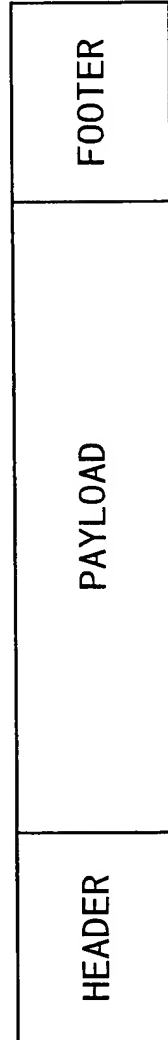


FIG. 12

HEADER	REPRODUCTION RULE JUDGEMENT CONDITION STATEMENT	REQUEST STATEMENT	FOOTER
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FIG. 13



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FIG. 14A

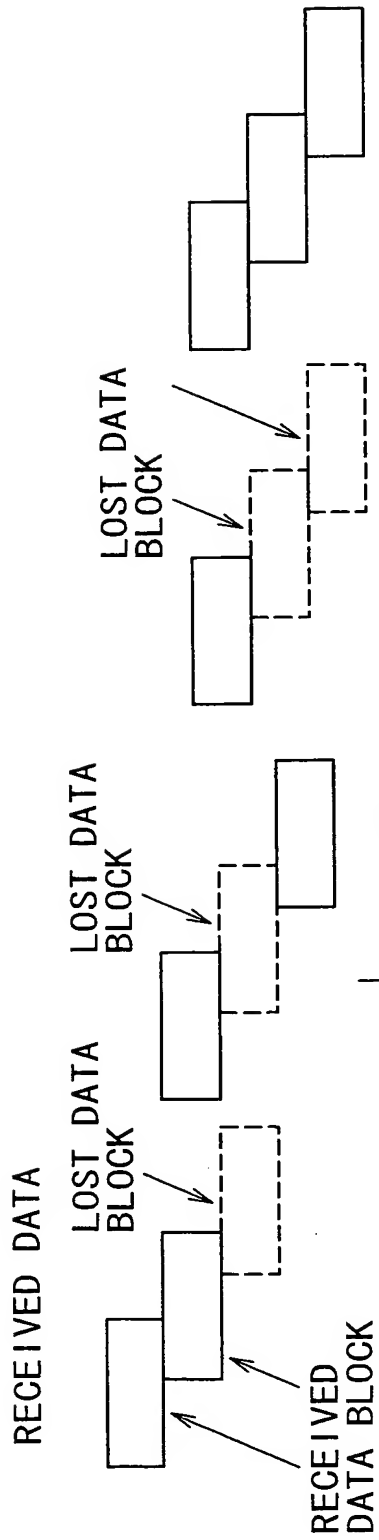


FIG. 14B

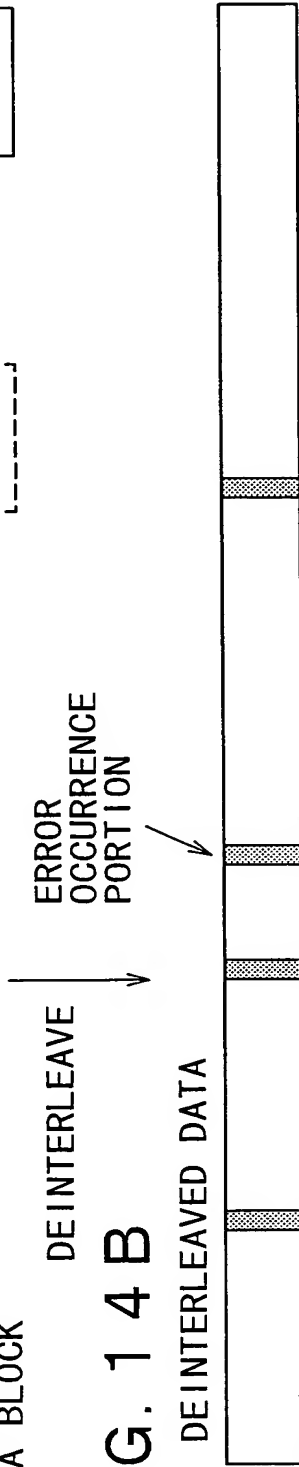


FIG. 14C

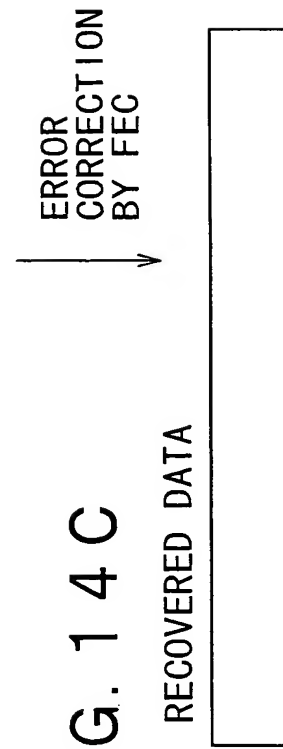
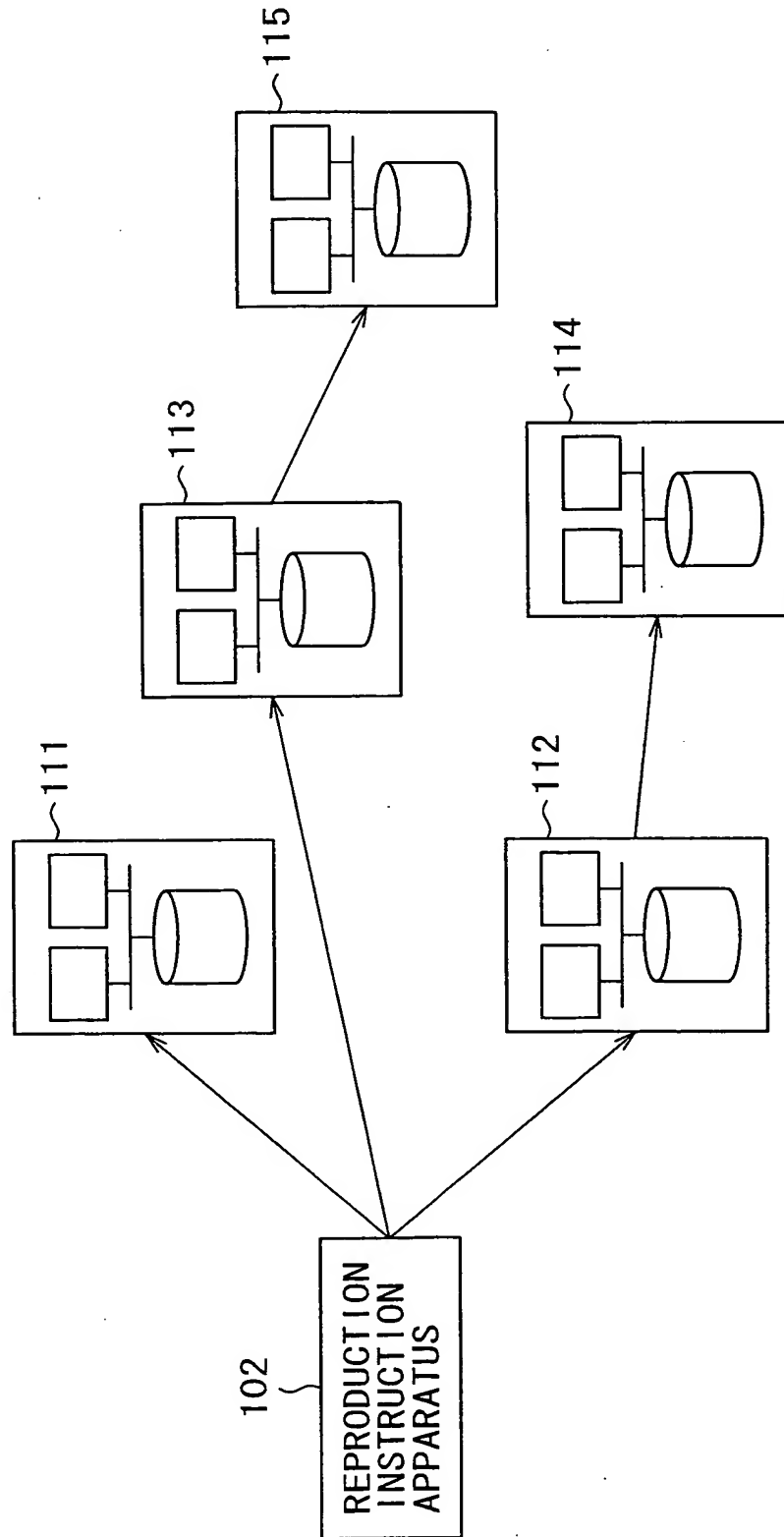


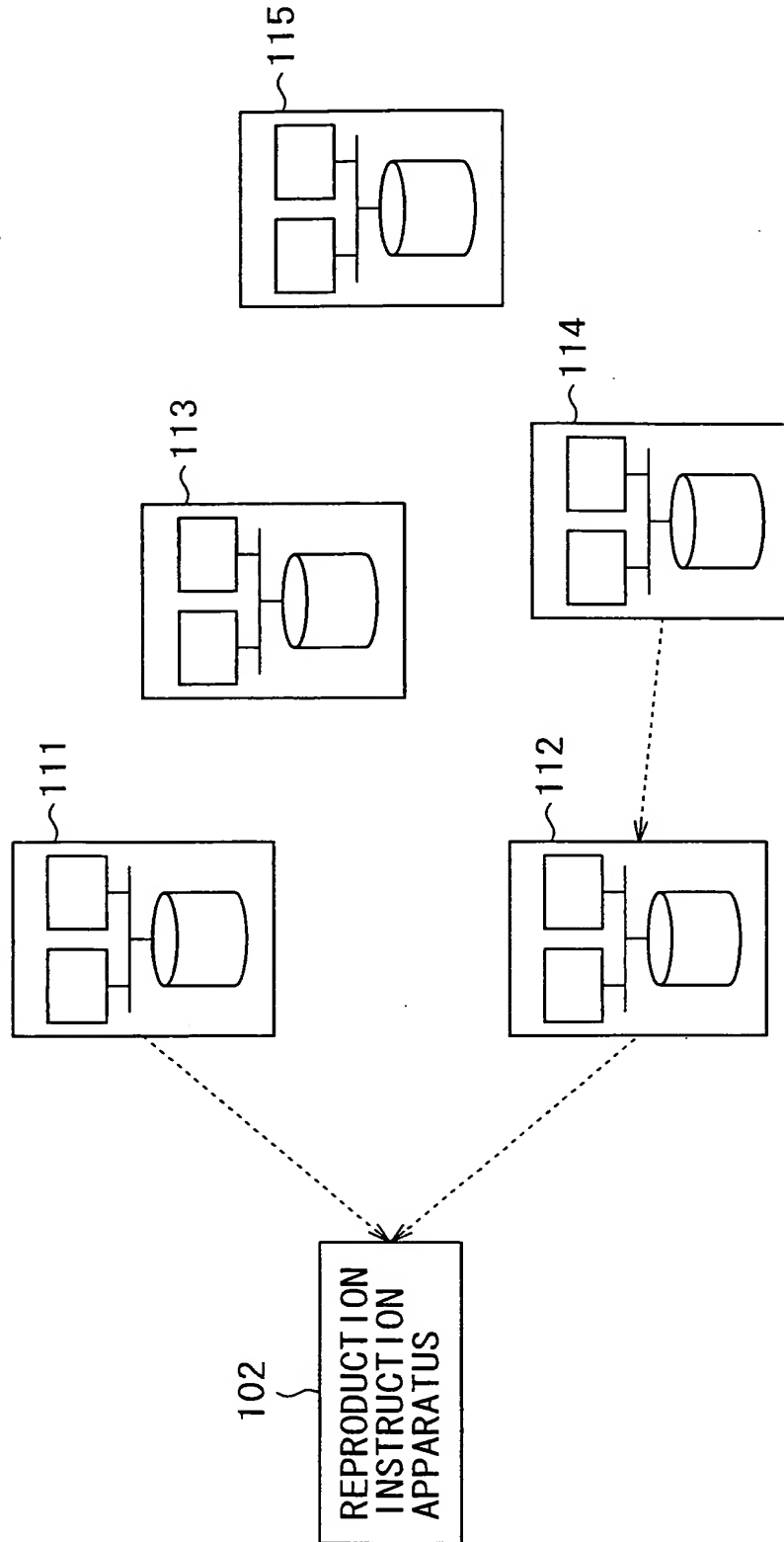
FIG. 15



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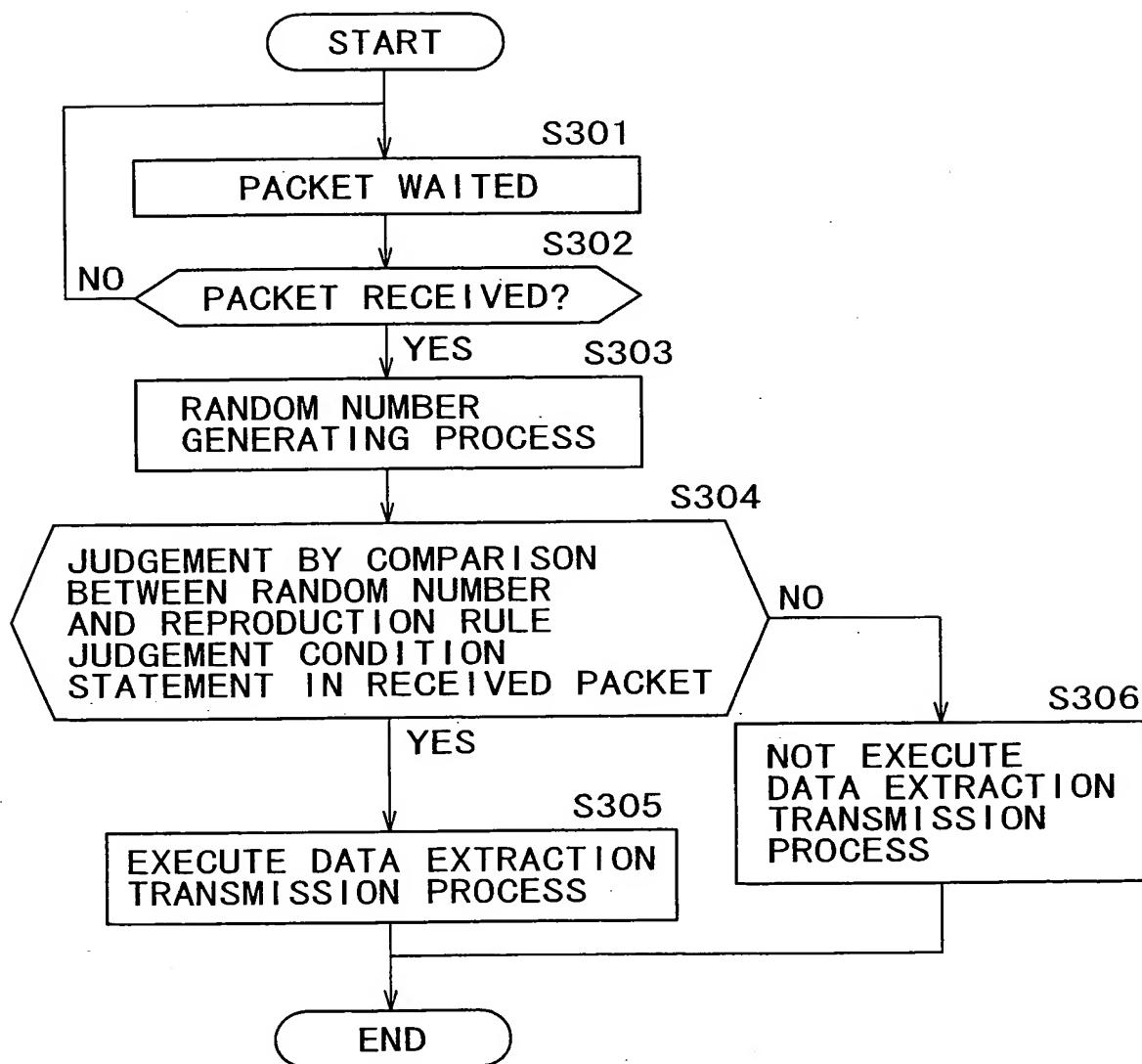
FIG. 16



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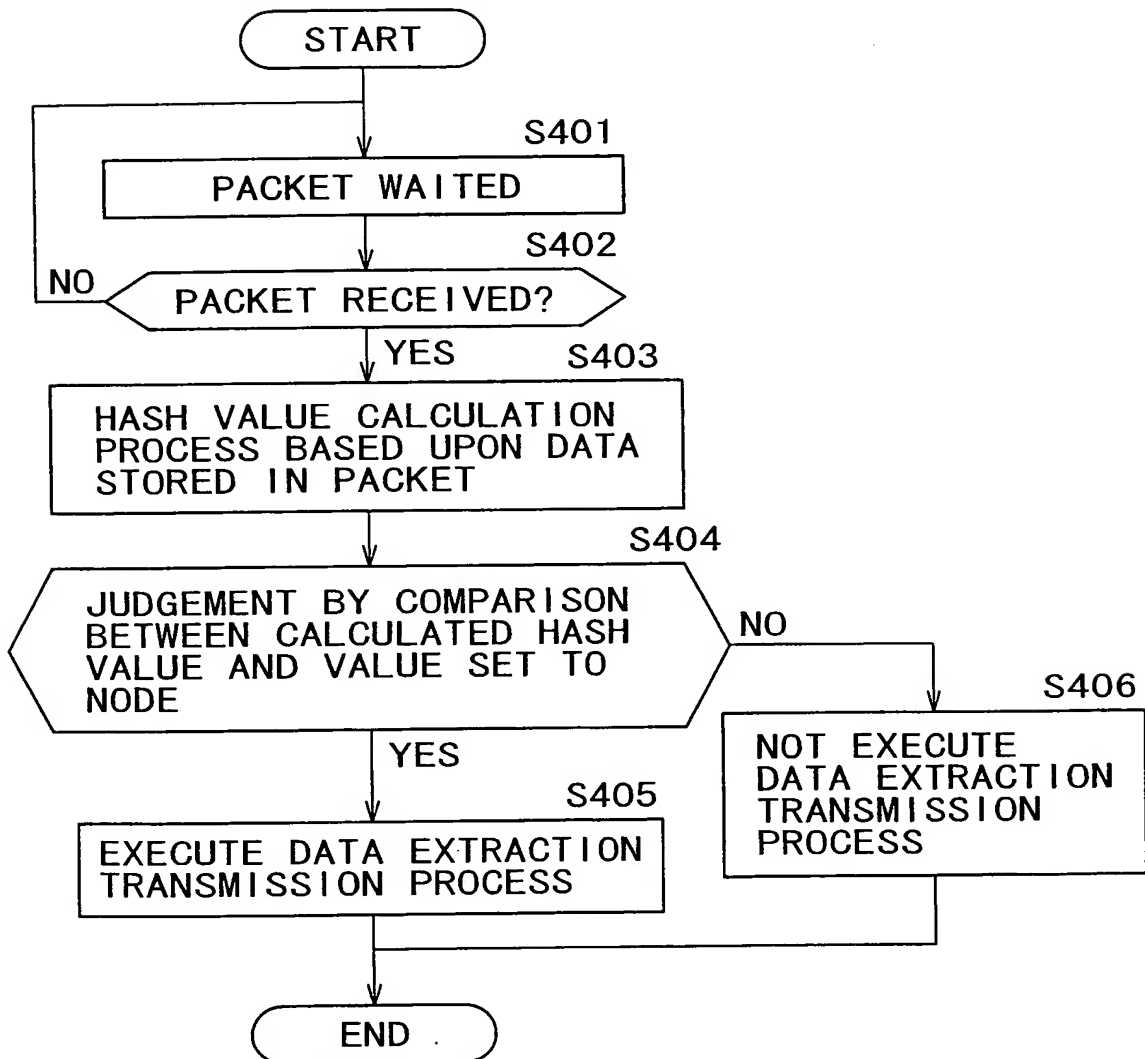
FIG. 17



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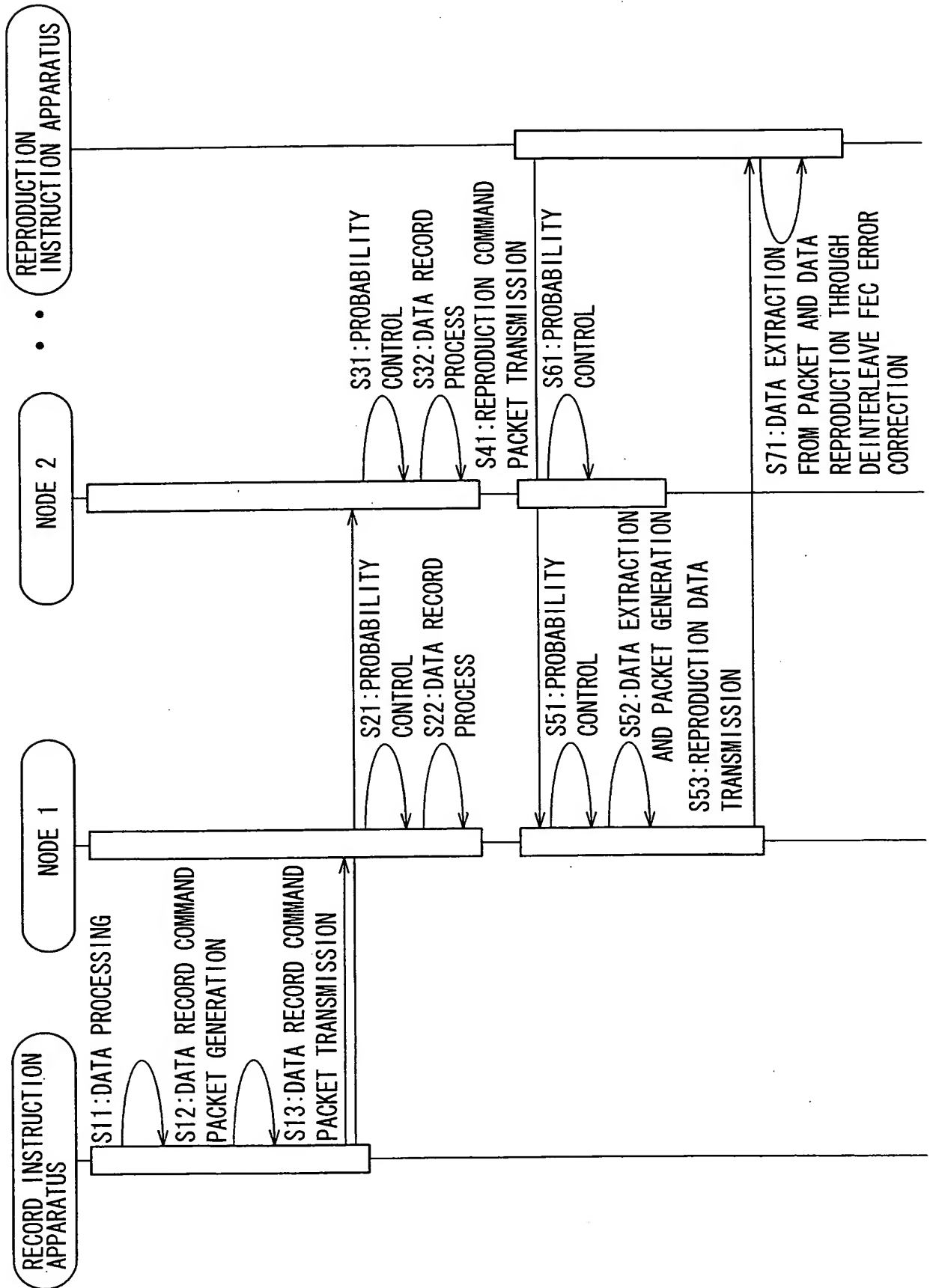
FIG. 18



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FIG. 19



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FIG. 20

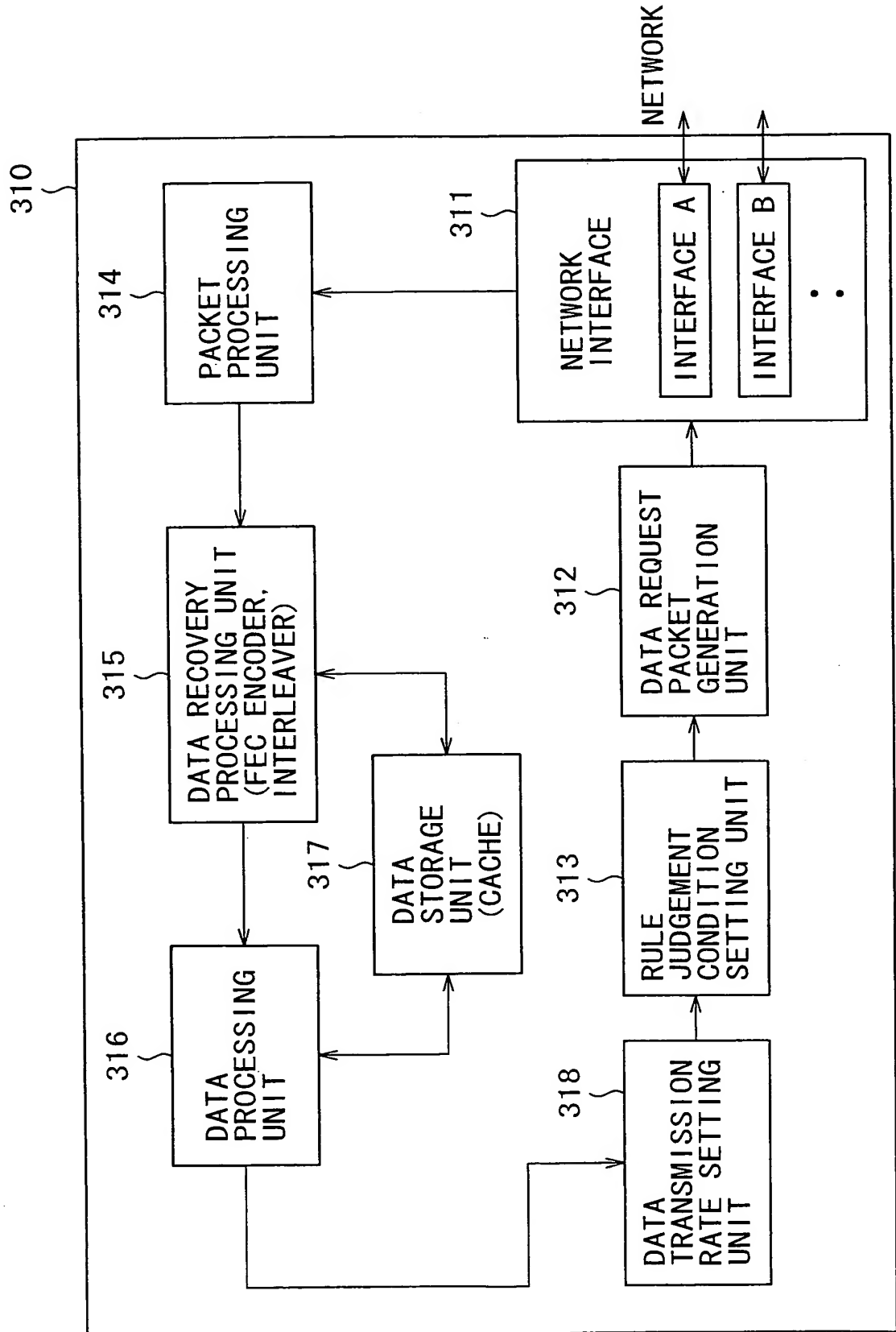
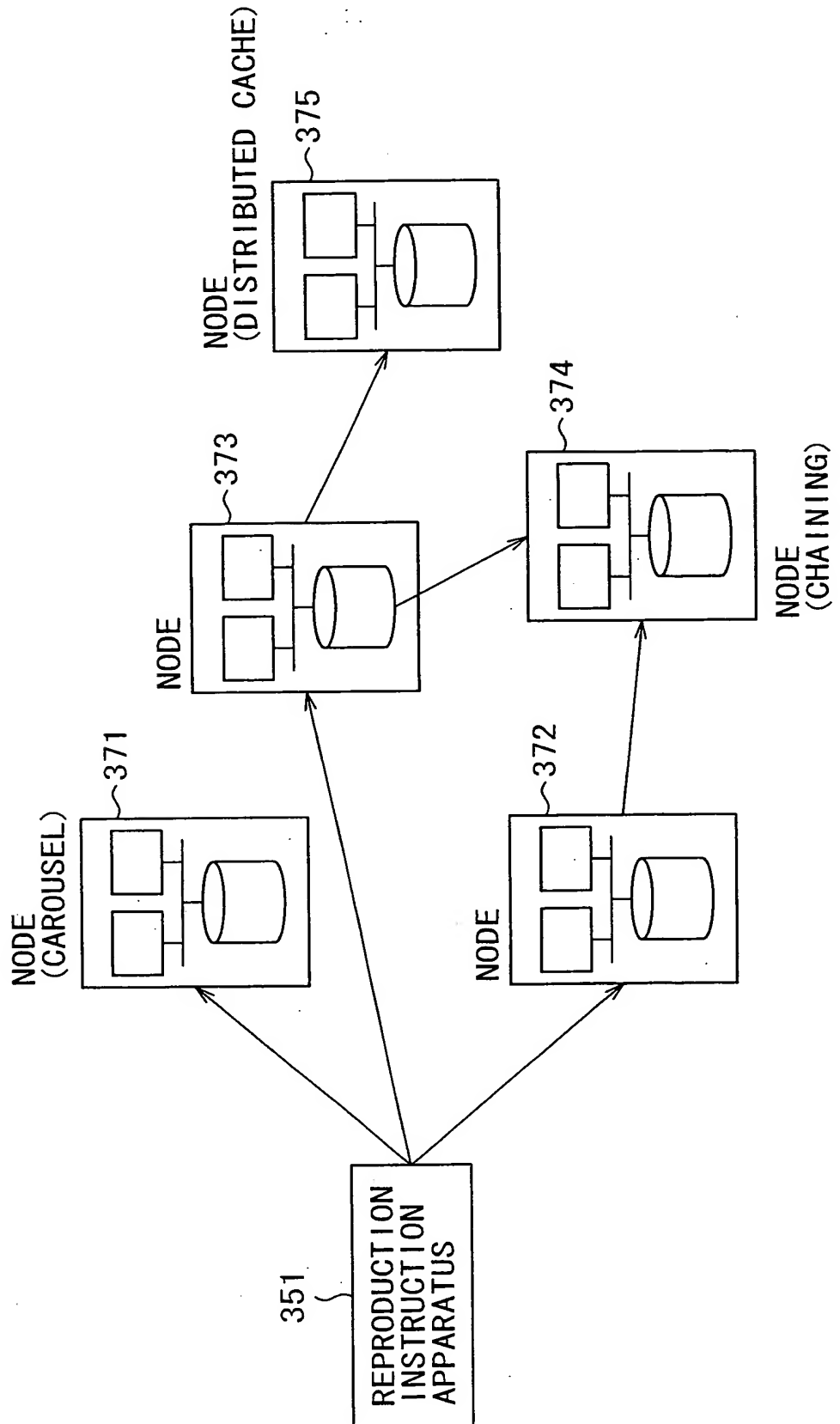


FIG. 21



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FIG. 22

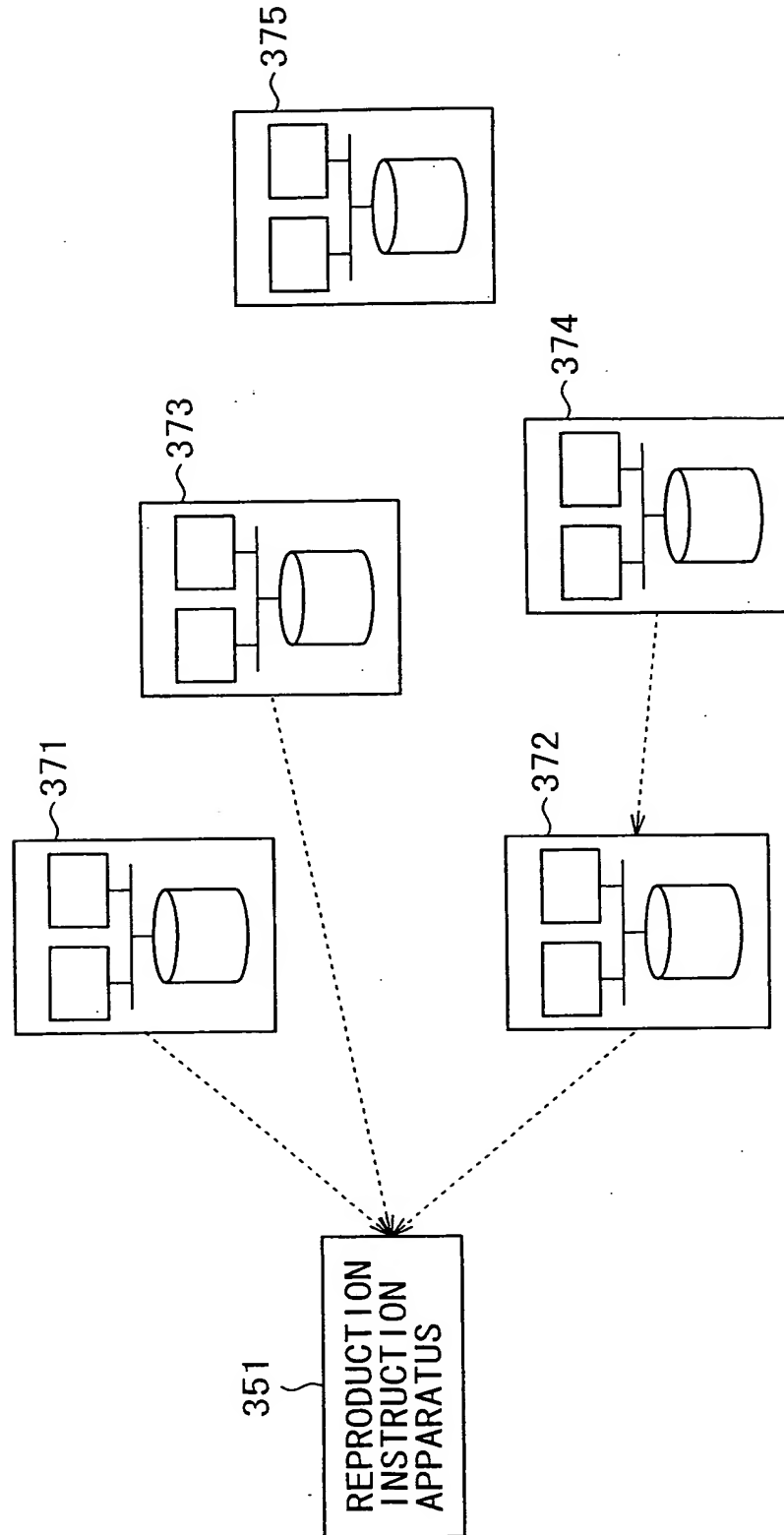


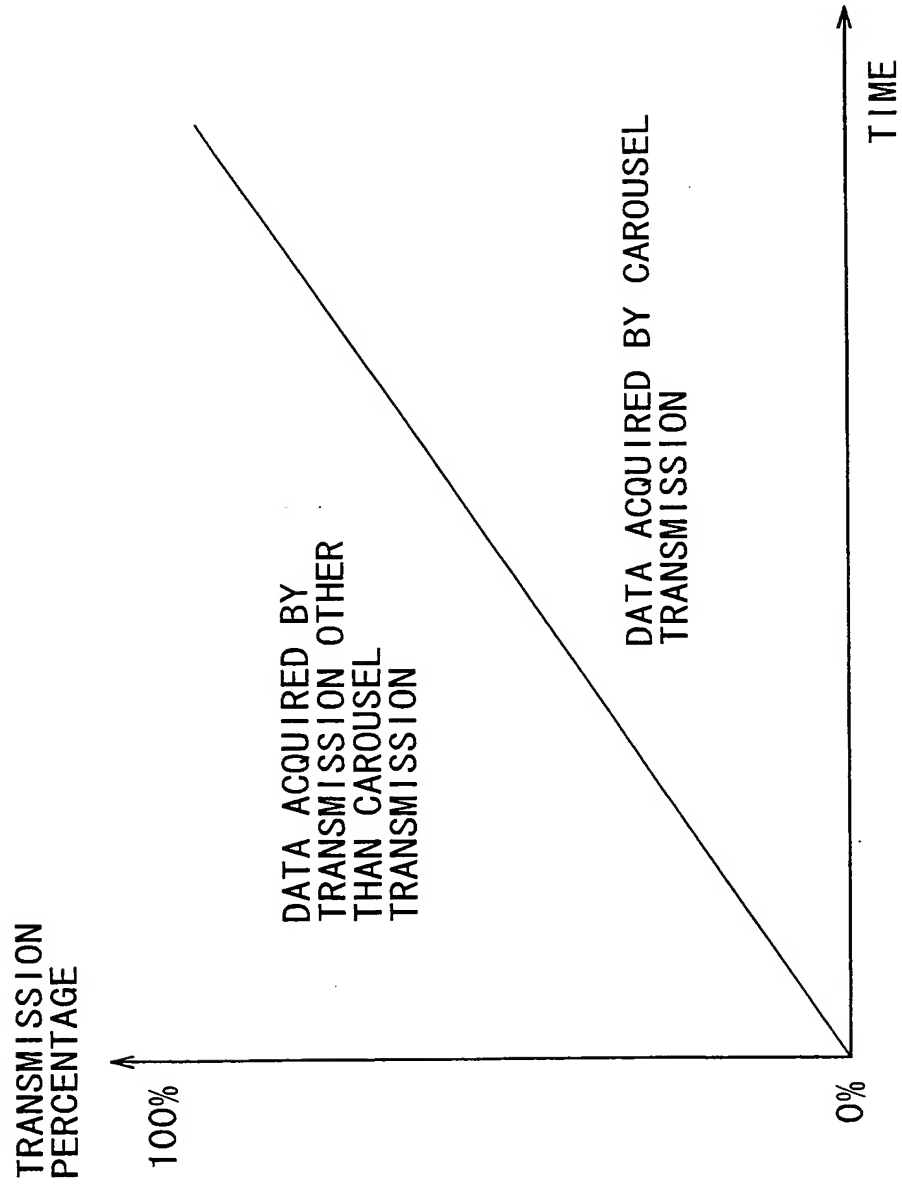
FIG. 23

	DISTANCE	NET LOAD	DATA DISCOVER DETECTION PROBABILITY	ON-DEMAND APTITUDE	TRANSMISSION LOSS	EFFICIENT DEMAND
CAROUSEL	FAR	SMALL	LARGE	SMALL	SMALL	QUITE LARGE
DISTRIBUTED CACHE (NEAR)	NEAR	SMALL	SMALL	LARGE	SMALL	LARGE
DISTRIBUTED CACHE (FAR)	FAR	LARGE	MIDDLE	LARGE	MIDDLE	LARGE
CHAINING	FAR	LARGE	LARGE	LARGE	LARGE	SMALL
LOCAL CACHE	NEAR	SMALL (LARGE)	SMALL	SMALL	SMALL	EFFECTIVE FOR ANY CASE
CLIENT SERVER	FAR	LARGE	LARGE	LARGE	SMALL	QUITE SMALL

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FIG. 24



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FIG. 25

RECEPTION NODE	MULUTICAST ADDRESS
NEAREST DISTANCE NODE	224. 200. xxx. yyy
NEAR DISTANCE NODE	xxx. yyy. aaa. bbb
MIDDLE DISTANCE NODE	ccc. sss. xxx. aaa
:	:
FAR DISTANCE NODE	ccc. bbb. xxx. aaa
ALL NODE	zzz. yyy. ppp. qqg

F I G. 2 6

DATA (CONTENTS ID)	MULUTICAST ADDRESS OR UNICAST ADDRESS
AB01266DE	224. 200. xxx. yyy
65DA974E2	xxx. yyy. aaa. bbb
4638ABD564	ccc. sss. xxx. aaa
:	:
286EAC886D	ccc. bbb. xxx. aaa
ED3421850A	zzz. yyy. ppp. qqq

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FIG. 27

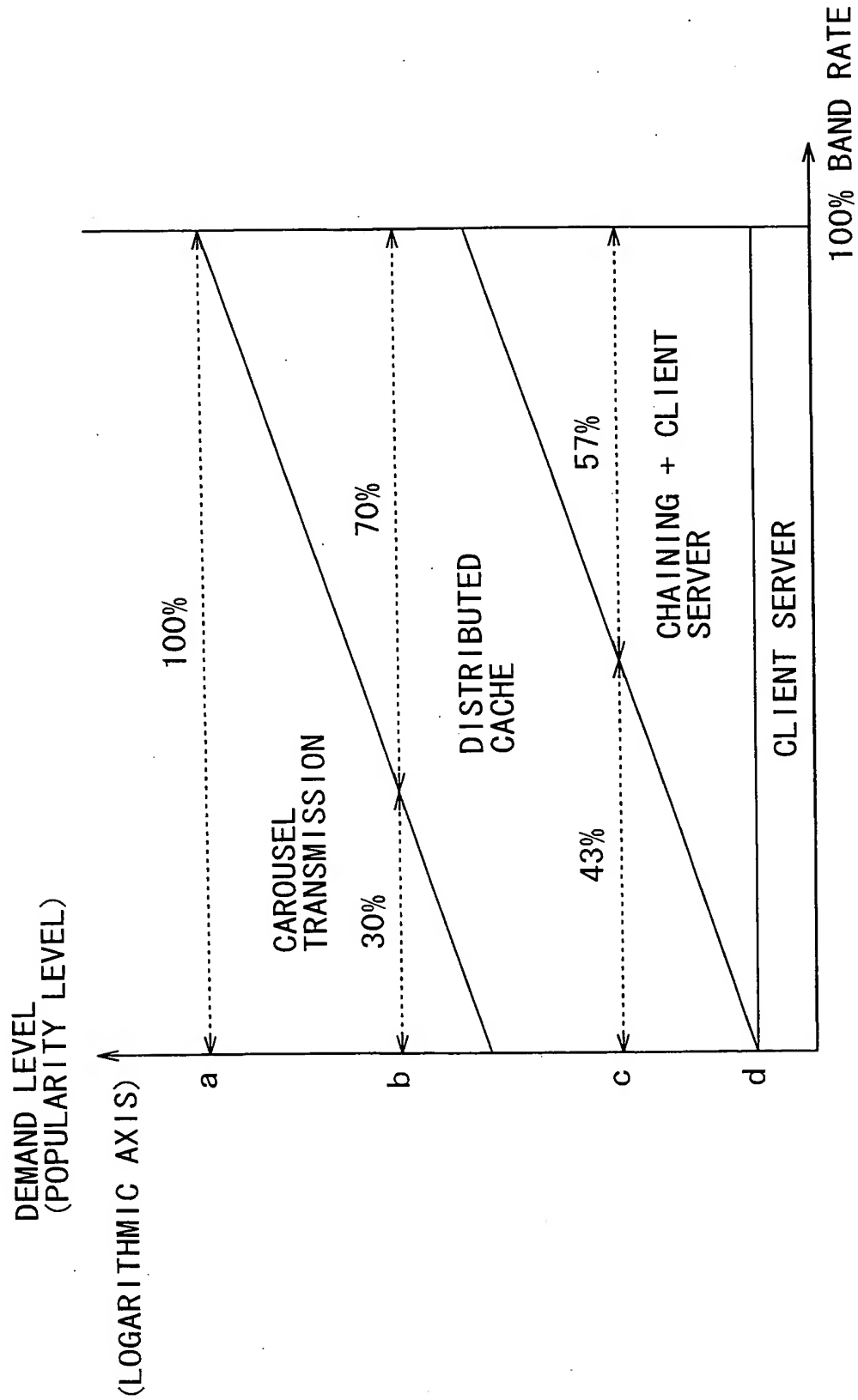
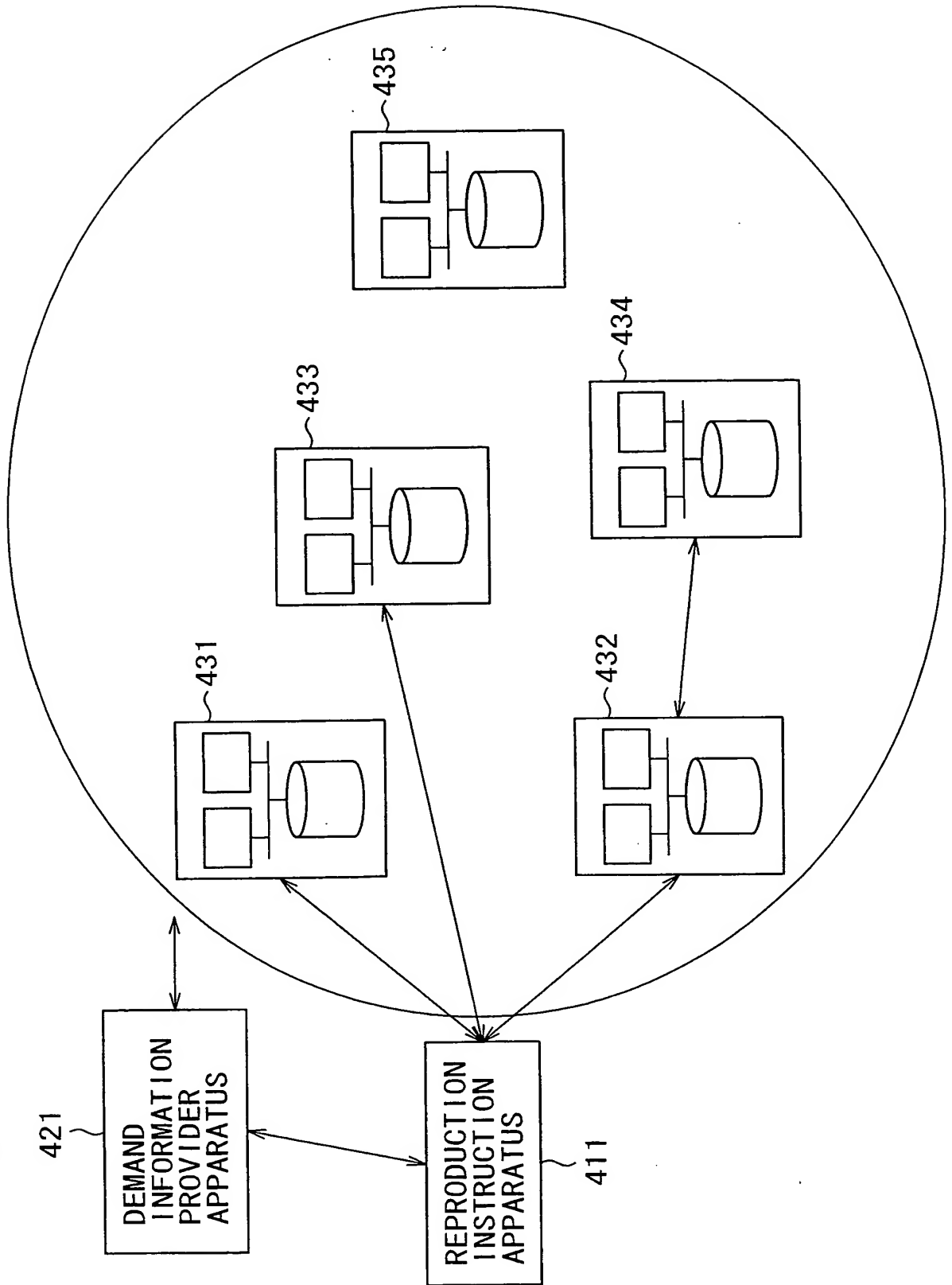


FIG. 28



The diagram illustrates a packet transmission system involving four nodes (NODE 1, NODE 2, and two unlabeled nodes) and three external apparatuses (RECORD INSTRUCTION APPARATUS, DEMAND INFORMATION PROVIDER APPARATUS, and REPRODUCTION INSTRUCTION APPARATUS).

Sequence of Operations:

- RECORD INSTRUCTION APPARATUS** sends **S501: DATA PROCESSING** to **NODE 1**.
- NODE 1** performs **S501: DATA PROCESSING**, **S502: DATA RECORD COMMAND PACKET GENERATION**, and **S503: DATA RECORD COMMAND PACKET TRANSMISSION**.
- NODE 1** sends **S511: PROBABILITY CONTROL** and **S512: DATA RECORD PROCESS** to **NODE 2**.
- NODE 2** performs **S511: PROBABILITY CONTROL** and **S512: DATA RECORD PROCESS**.
- NODE 2** sends **S521: PROBABILITY CONTROL** and **S522: DATA RECORD PROCESS** to the unlabeled node below it.
- The unlabeled node below **NODE 2** performs **S521: PROBABILITY CONTROL** and **S522: DATA RECORD PROCESS**.
- The unlabeled node below **NODE 2** sends **S531: INQUIRY** to the **DEMAND INFORMATION PROVIDER APPARATUS**.
- The **DEMAND INFORMATION PROVIDER APPARATUS** sends **S532: RESPONSE** to the unlabeled node below **NODE 2**.
- The unlabeled node below **NODE 2** performs **S533: DATA REPRODUCTION, COMMAND PACKET GENERATION**.
- The unlabeled node below **NODE 2** sends **S534: REPRODUCTION COMMAND PACKET TRANSMISSION** to **NODE 1**.
- NODE 1** performs **S551: PROBABILITY CONTROL** and **S552: DATA EXTRACTION AND PACKET GENERATION**.
- NODE 1** sends **S553: REPRODUCTION DATA TRANSMISSION** to the unlabeled node below it.
- The unlabeled node below **NODE 1** performs **S551: PROBABILITY CONTROL** and **S552: DATA EXTRACTION AND PACKET GENERATION**.
- The unlabeled node below **NODE 1** sends **S561: DATA EXTRACTION FROM PACKET AND DATA REPRODUCTION THROUGH DEINTERLEAVE FEC ERROR CORRECTION** to the **REPRODUCTION INSTRUCTION APPARATUS**.

FIG. 30

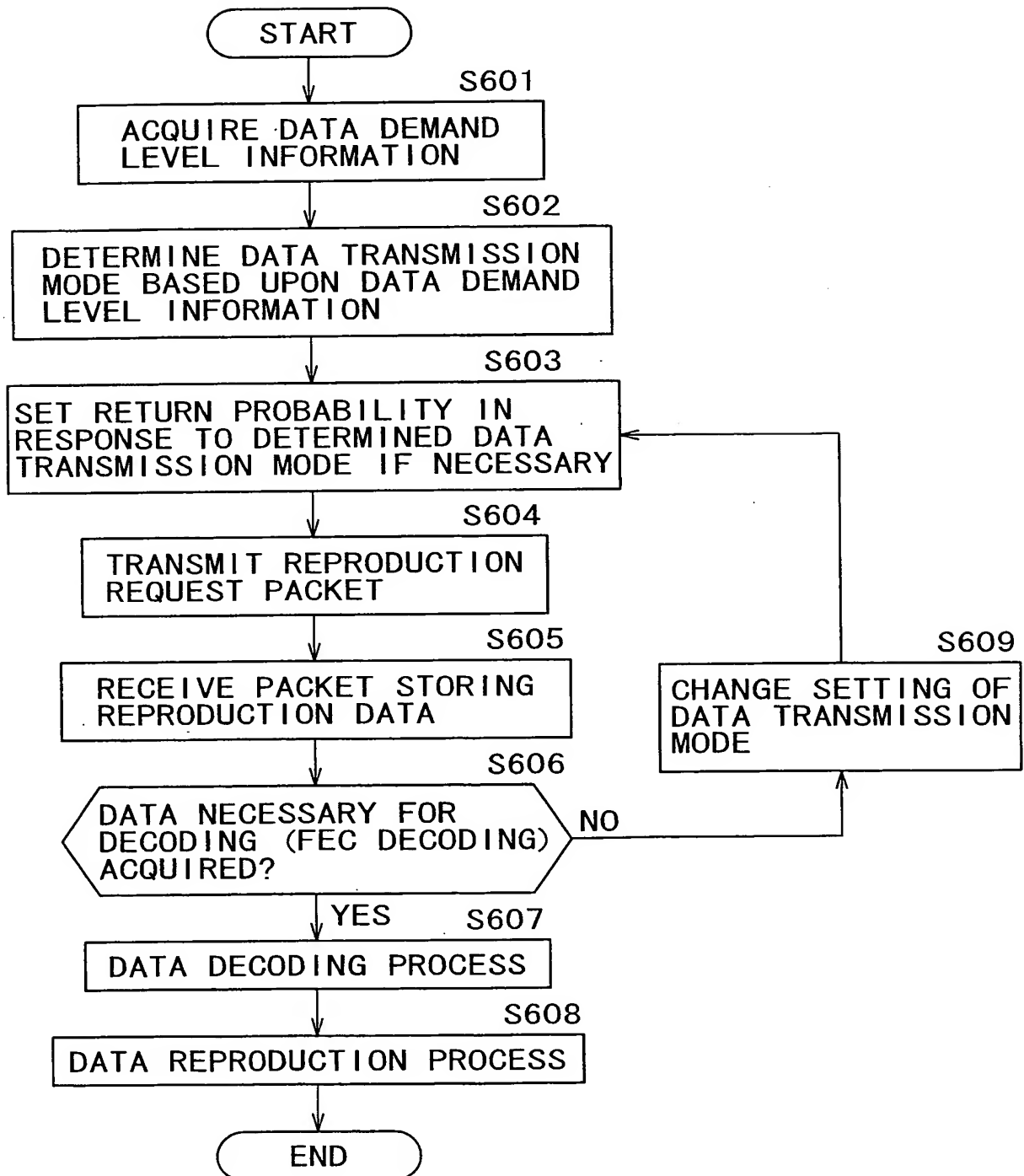


FIG. 31

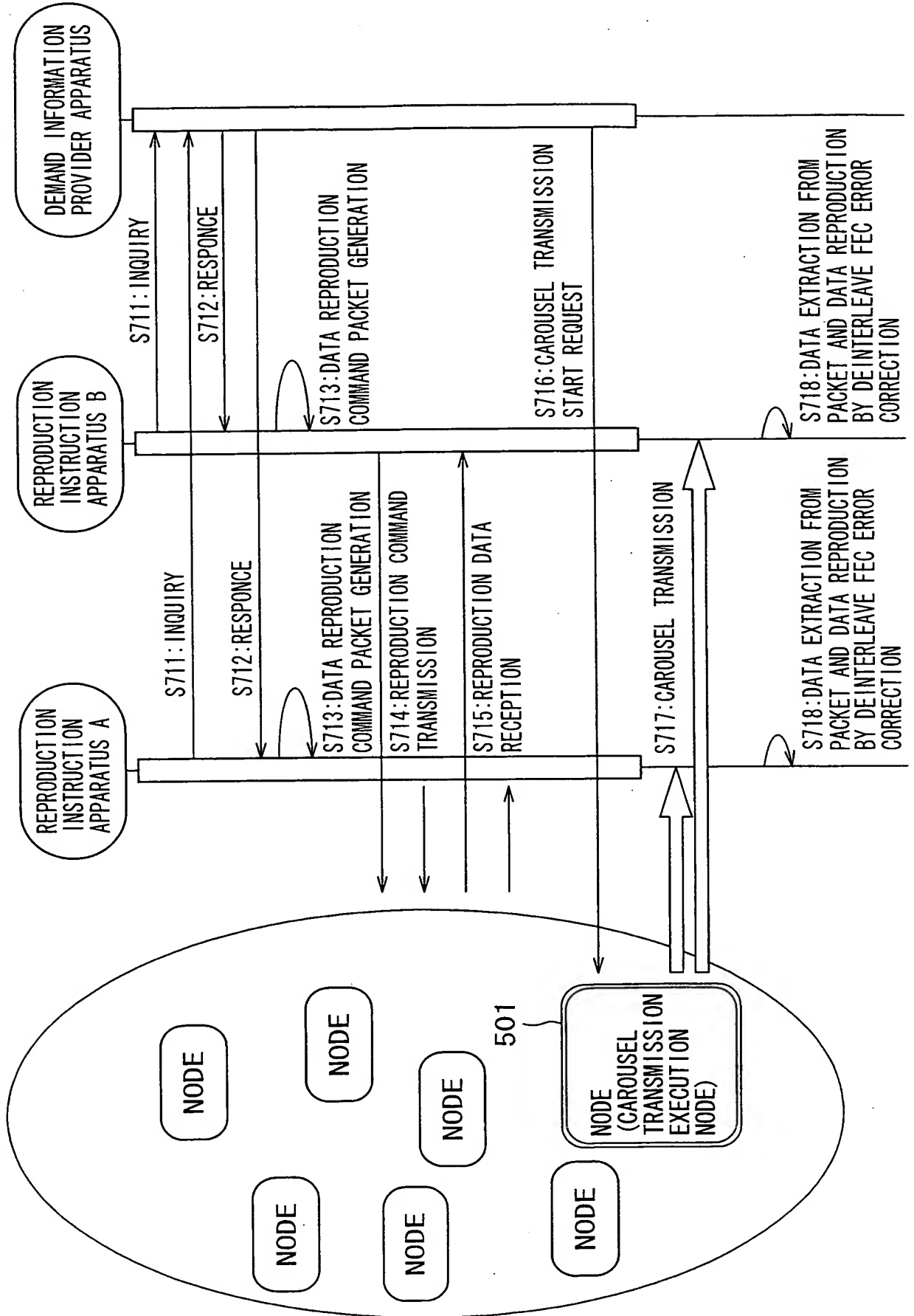


FIG. 32

